

Amendments to the Abstract:

Please amend the Abstract filed with the amendment of June 27, 2005 as follows:

~~The present invention relates to "closed loop"~~ Closed loop processes, systems, and compositions are used for enhancing the flame retardant properties of substrates, such as fibers, containing at least about 5 percent weight of non-thermoplastic materials. The processes and systems include apparatuses and methods for removing, recovering, and reusing excess flame retardant compositions, thereby mitigating the environmental detriments consistent with waste fire retardant composition. A further benefit of minimizing waste ~~according to the present invention~~ is the reduced cost for the fire retardant composition, and the reduced cost of waste disposal. The ~~disclosed process and~~ system enables multiple batches of substrates to be processed in a pipeline fashion, whereby the excess fire retardant composition is reused and shared between multiple "parallel" processes. The processes and systems permit all substrates being processed to be exposed to the same concentrations of chemical agents, such that all treated substrate products have a uniform amount of fire retardant chemicals. Further, the processes and systems allow depleted, free run, fire retardant composition to be transferred between separate processing or storage tanks, and allow excess fire retardant composition retained in treated substrates to be physically separated by, for example, centrifugation, in order to allow re-use.